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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

JACKSON, CORNELIUS H

ART UNIT PAPER NUMBER

2828

DATE MAILED: 12/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/900,429

Applicant(s)

DAIBER, ANDREW

Examiner

Cornelius H. Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.


- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


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Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-13 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an optical output assembly optically coupled to the **first** output facet, does not reasonably provide enablement for an optical output assembly optically coupled to the **second** output facet. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The specification only supports an optical output assembly coupled to the facet of the gain medium that defines one of the ends of the external cavity (which would be the first output facet, since the reflector and the first output facet defines an external cavity, as stated in claim 1). Therefore the structural relationship between the optical output assembly and the second output facet is not supported in the specification. Claims 2-13 are rejected for depending on an indefinite base claim.

3. Claims 14-24 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an end mirror positioned in the first optical path, the end mirror and the **second** output facet defining an external cavity, does not reasonably provide enablement for an end mirror positioned in the first optical path, the

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end mirror and the **first** output facet defining an external cavity. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The specification only supports an optical output assembly coupled to the facet of the gain medium that defines one of the ends of the external cavity (which would be the second output facet, since the optical output assembly and the second output facet are optically coupled, as stated in claims 14 and 23). Therefore the structural relationship between the optical output assembly and the second output facet is not supported in the specification. Claims 15-22 and 24 are rejected for depending on an indefinite base claim.

Claim Objections

4. Claim 3 is objected to because of the following informalities: The outline lettering of claim 3 should continue where claim 1 ended; therefore, "(a)" in line 2 should be changed to "(g)", the "(b)" in line 3 should be changed to "(h)", and the "(c)" in line 5 should be changed to "(i)". Also claims 16, 17, 20, 24, 29, 31 and 32 should continue the outline lettering of the claim on which they depend on. Appropriate correction is required.

5. Claim 26 is objected to because of the following informalities: The outline letter "d" in line 4 of claim 26 should be changed to "c". Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

7. Claim 30 is rejected under 35 U.S.C. 102(e) as being anticipated by Sesko et al. (5438579). Sesko et al. disclose a laser apparatus, comprising: (a) a gain medium **1**; (b) a reflector **11**, the reflector **11** and an output facet of the gain medium **1** defining a laser cavity; and (c) means for providing selective thermal control to the gain medium **1** independently from the reflector **11**, **see col. 7, lines 57-59 and col. 13, lines 11-18**.

8. Claims 30 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Fee (5943352). Fee disclose a laser apparatus **Figs. 1-3**, comprising: (a) a gain medium **124**; (b) a reflector **208A-C**, the reflector **208A-C** and an output facet of the gain medium **124** defining a laser cavity; and (c) means for providing selective thermal control **308** to the gain medium **124** independently from the reflector **208A-C**.

Regarding claim 31, Fee discloses (a) an optical output assembly **126** optically coupled to the gain medium **124**; and (b) means for providing selective thermal control to the optical output assembly **126** independently from the reflector **208A-C**.

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Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-30 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sesko et al. (5438579). Sesko et al. teach a laser apparatus **Figs. 2A-F** comprising a gain medium **1** having first **21** and second **22** output facets; a reflector **11**, the reflector **11** and the first output facet **21** defining an external cavity; an optical output assembly **2A** optically coupled to the *first* output facet **21**; a thermally conductive substrate, the gain medium **1** mounted on the thermally conductive substrate, a thermoelectric controller joined to the thermally conductive substrate and the gain medium **1** configured to be thermally controlled by the thermoelectric controller via thermal conduction through the substrate; and the reflector **11** positioned remotely from the thermally conductive substrate and the thermoelectric controller, **see col. 7, lines 57-59 and col. 13, lines 11-18**. Sesko et al. fails to teach the optical output assembly mounted on the thermally conductive substrate and the optical output assembly being configured to be thermally controlled by the thermoelectric controller via thermal conduction through the substrate. Instead Sesko et al. teach the first output facet **21** is used as an output coupler, as a design choice, **see col. 13, lines 26-30**. It would have been obvious to one having ordinary skill in the art at the time the invention was made to separate the functions of the output facet between the facet and another optical

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coupling device, since it has been held that constructing a formerly integral structure in various elements (or formerly separate elements into one) involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

Regarding claims 14, 23, 25-27, 31 and 32, Sesko et al. teaches all the stated limitations, **see rejection to claim 1 above**.

Regarding claims 2, 6, 8, 11-13, 15, 17-18 and 20-22, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claims 3, 16 and 24, Sesko et al. teach a channel selector **5**; a tuning assembly operatively coupled to the channel selector **5** and configured to adjust the channel selector **5**; and the channel selector **5** and the tuning assembly positioned remotely from the substrate, **see col. 13, line 46-col. 14, line 65**.

Regarding claims 4, 5 and 19, Sesko et al. teach a first and second collimating lens **2A(B)** optically coupled to an output facet and configured to be thermally controlled, **see rejections above**.

Regarding claim 7, Sesko teach all the stated limitations, **see col. 1, lines 24-26**.

Regarding claim 9, Sesko teach a grid etalon **4**, **see rejections above**.

Regarding claim 10, Sesko teach all the stated limitations, **see col. 1, lines 24-26 and col. 9, lines 3-14**.

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Regarding claims 28 and 29, the method of forming a device is not germane to the issue of patentability of the device itself. Therefore, the rejection used against the device, stands for the method as well.


Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pease et al. (6304586) **Fig. 2, col. 13, line 53-col. 14, line 60**, discloses a similar invention.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cornelius H. Jackson whose telephone number is (703) 306-5981. The examiner can normally be reached on 8:00 - 5:00, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7722 for regular communications and (703)308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.


chj

December 2, 2002


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